1/10

FIGURE 1

FIGURE 2

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                                          1                 Motif 1              40
                         CDS0689     (1)  ----MSVLQYPEGIDPADVQIWNNAAFPNGDSEDLSEIKR
                      CDS0689 At     (1)  ---MTSIEATETLNAPPYIQIWNIAAFPDGDSQIESAIEA
       CDS0689 Medicago trunculata   (1)  ---MNNTNNNNILLHSTQVQVWNNAAFLGEDFAMNSSSDS
                      CDS0689 Os     (1)  ---------MEEDPLIPLVHVWNIAAFDDSSCSRSAWIPQ
                CDS0689 Ta variant   (1)  ---------MMEEDPLIPLVHVWITGAFPSSSSSAWHAHA
                      CDS0689 So     (1)  ---------MEEDPLIPLVHVWNIPFDHASSSAWHAHSP
             CDS0689 Zm variantrev   (1)  ---------MEEDPLIQLVHVWISIACDNAARSSSVCHAH
                CDS0689 So variant   (1)  ---------MEEDPLIPLVHVWNIPFDHASYSAWHAHSP
                  CDS0689 Bn estl    (1)  ----MTSTEHTETLNAPEIQIHNNAAFPDGDSNLTSAIEA
    CDS0689 Eschscholzia californica (1)  ------MLEISETLNLPDLQIHNNAAFDSGSIDNHTTAIK
                    CDS0689 Ga estl  (1)  ----MSILQYPDSFNVPEIQVWNNAAFPNGDSEDTNAIKD
                      CDS0689 Pt     (1)  ---MSSILQYPDVVDAPEVQIWNIAAFPNGESEGSLNLKS
          CDS0689 Plumbao zeylanica  (1)  MNEVLHIQEAARTDSSTDHQIWNIAAFSGIESEDSPVVID
           CDS0689 Citrus sinensis   (1)  ----MSVLQYPDTLNGQEIQIWNIAAFPNGESEDSTAMKG
                       Consensus     (1)       I     E   IPEVQIWNNAAFD GDS  S AI

                                          41                Motif 2              80
                         CDS0689    (37)  --SWSPLKPLSVRPSDSFESDLSSKENQTILFENSSVNLS
                      CDS0689 At    (38)  SSWSHLN-------ESFDSDCS--KENQFIISVSSSLQSS
       CDS0689 Medicago trunculata  (38)  ----------------------IKINLNPSAFN------
                      CDS0689 Os    (32)  ---SP---------AVAAVRKGDKENHRPEVVD------
                CDS0689 Ta variant  (33)  ----------------TPVRRGEKENRRPAETN------
                      CDS0689 So    (32)  -----------VPASRRRPARGDKPNHRPDPDP------
             CDS0689 Zm variantrev  (32)  -----------SPAPASAREGPGDKILREEPDV------
                CDS0689 So variant  (32)  -----------ARASAGHEARGDKINHRPDPDP------
                  CDS0689 Bn estl   (37)  ----------SWSNLNASFDSDCSKEIQIIVSVSSSLKSS
    CDS0689 Eschscholzia californica(35)  ASSSPLKPIVLNQSEPSILDSIYTELQTPSCCISPVRTK
                    CDS0689 Ga estl (38)  SWCNFNS-----GSVNQSLESDGSKEIQSILWIKSPVSFK
                      CDS0689 Pt    (38)  -----------SWWNQSLESDASKIILSPVCEQSSPVFV
          CDS0689 Plumbao zeylanica (41)  --F------SAPNLSQSLLSDSSIRILSPSLAEMPHPAK
           CDS0689 Citrus sinensis  (37)  SWANLKS-----VYMNGSLESDCSKEILSPRLNKSPTSSL
                       Consensus    (41)              S  ESDG KEN  P    S

                                          81                                   120
                         CDS0689    (75)  SPLPIKPLNPNGALENSRLKPNKPNSKQSLDEMAARKSGK
                      CDS0689 At    (69)  VSITEAPS-------------AKSKTVKTKSAADRSKK-
       CDS0689 Medicago trunculata  (49)  ---IVPS-----------------------------SNK-
                      CDS0689 Os    (53)  ---VAAG--------------------------------
                CDS0689 Ta variant  (50)  ---------------------------------------
                      CDS0689 So    (54)  ---------------------------------------
             CDS0689 Zm variantrev  (55)  ---------------------------------------
                CDS0689 So variant  (54)  ---------------------------------------
                  CDS0689 Bn estl   (67)  VSFSTDDP----------------IRCGKVK-----EKPH
    CDS0689 Eschscholzia californica(75)  SPLPIKPLHPNG---------------------------
                    CDS0689 Ga estl (72)  STASVVKP--------LSSKNVTGNTREPFSAKMKSGVCKE
                      CDS0689 Pt    (66)  NSSKPAKPLQ-----------------------------
          CDS0689 Plumbao zeylanica (73)  SPMQK----------------------------------
           CDS0689 Citrus sinensis  (72)  KSCVPNKPLQVN---------SSVKNSQMKQLK--SVSK
                       Consensus    (81)

                                          121      Motif 3: coiled coil        160
                         CDS0689   (115)  GNDFRDEKKIDEEIEEIQMEISRLSSRLEALRIEKAEKTV
                      CDS0689 At    (94)  -------RDIDAEIEEVEKEIGRLSIKLESLRIEKAEQTA
       CDS0689 Medicago trunculata  (56)  -------RTIDDEIAEIESEIKRLISKLELLRVEKAERKI
                      CDS0689 Os    (57)  -------YDVEAFIGHIEAEILRLSSRLHHLRVSKQPEPN
                CDS0689 Ta variant  (50)  --------DADAEIARIEAEILRLSSRLHHLRVSKGHDAK
                      CDS0689 So    (54)  -------DVEAEIGHIEAEILRLXSRLHHLRTSKQSEPS
             CDS0689 Zm variantrev  (55)  ---------EEEMRHIEAEILRLSLRLHHLRTSQQLQPP
                CDS0689 So variant  (54)  -------DVEAEIGHIEAEILRLSSRLHHLRTSKQSEPP
                  CDS0689 Bn estl   (86)  KTGKVRHGDIDAEIEEVEKFMNRLSIRIESLRIEKAEQIA
    CDS0689 Eschscholzia californica(87)  ---------------------------------------
                    CDS0689 Ga estl(105)  EEKRRDEKKIDMEIEEIEKEVARLSAKLESLRIEKPNIMQ
                      CDS0689 Pt    (76)  ---------------------------------------
          CDS0689 Plumbao zeylanica (78)  ---------------------------------------
           CDS0689 Citrus sinensis (100)  EEETRDERKIDIEIEEIEKEISRLSSRLEALRIEKIDIKT
                       Consensus   (121)       ID EI  IE EI RLSSRL LRL K
```
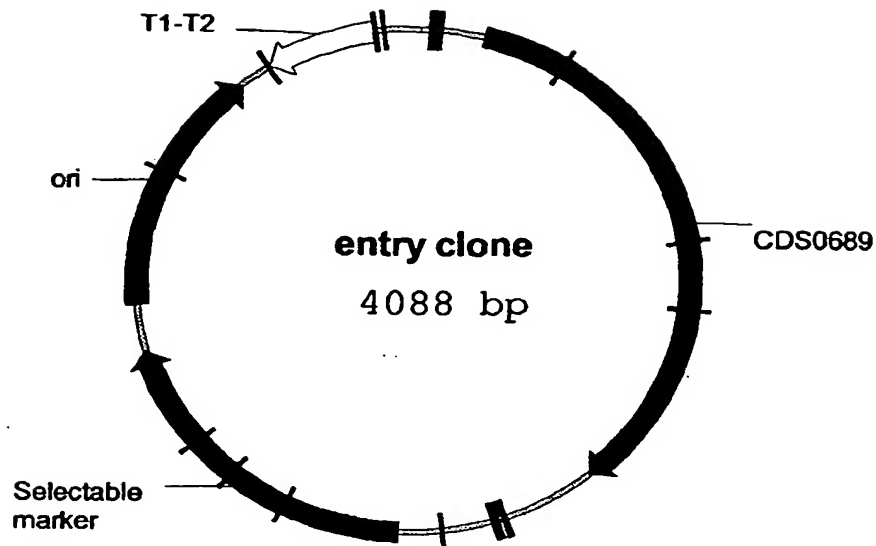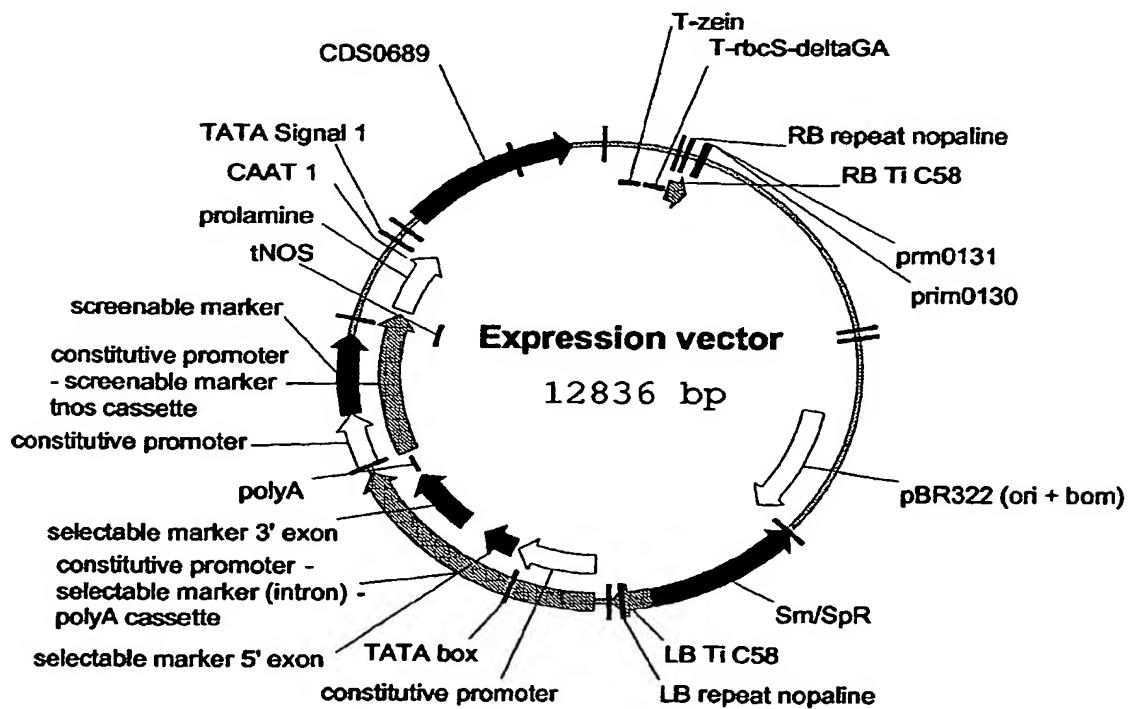
FIGURE 3

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                                      401                                        440
               CDS0689    (339)  IQSSVVRKRSLPENDKDESKRNDKKRSLSVGKTRVSQTES
            CDS0689 At    (294)  TGEKDVRKRSLPEDEEKENHKRSEKR-------RASDESN
CDS0689 Medicago trunculata (284)  GGD--ARKRSFSEN----------------------N
            CDS0689 Os    (297)  AAAAAATAKRMAGSSKMRVIPSRYSLTPGASLESSGAQERR
   CDS0689 Hv contig 123   (111)  ISTASTCRRPAGSSKVVVPSRYSLMPGASLG-AATQDGR
      CDS0689 Ta contig    (1)   -------------------GRYSLMPGASLGAASQERRR
      CDS0689 Zm partial   (87)  TSNVATTKRPAGSSKVRVVPSRYSTPPGSSIRAVTQGNRC
      CDS0689 Sacc sp 3'   (84)  TSNAATAKRPAGSSKVRVVPSRYSLTPGSYLAAVSQDKRS
   CDS0689 Pinus taeda 3'  (1)   ----------------------------------------
             Consensus    (401)         KR        R      RYSL PGA LG
                                      441                                        480
               CDS0689    (379)  KNL---GTESRVKKRWEIPSEIVVHGNTESEKSPLSIIVK
            CDS0689 At    (327)  K------SEGRVKKRWEIPSEVDLYSSGEN--GDESPIVK
CDS0689 Medicago trunculata (297)  KGL---GSEIRAKKRWEIPIEEVDVSG--------FVM--
            CDS0689 Os    (337)  RKQSLPGSSGDANQHEEIRAKVIEPSN--DPLSPQTSKV
   CDS0689 Hv contig 123   (150)  RKESLPGSTGSTGQKEEIKAVPTEPVD--DDLSPESLDKV
      CDS0689 Ta contig    (21)  KESLPGSTGGAGQKEEEIKAMPTEPVD--DDLSPESLDKV
      CDS0689 Zm partial   (127)  KQS-----LPGSATETRVNLTEPPNDE----LSPEFIAKV
      CDS0689 Sacc sp 3'   (124)  KQS-LPGPASAASQREEIRAKLTEPSK--DELSPEIVAKV
   CDS0689 Pinus taeda 3'  (1)   -----------XEARIVFGTGNSAIMAGGTKAPDILERH
             Consensus    (441)  K       GS      R EI A    E      LSPESL KV
```

Motif 4

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                                      481                                        520
               CDS0689    (416)  PDLLPRIRIARCVNELRDSSPARRMIELIGIKSFFSSDE
            CDS0689 At    (359)  --ELPKIRTIRRVGGSPRDSGAAKRVAELQAK--------
CDS0689 Medicago trunculata (324)  ---LPKISTMRFVDESPRDSGAVKRVAELNGKRSIFCDED
            CDS0689 Os    (375)  AELLPKIRTMPPPDESPRDSGCAKRVAELVGKRSFFTAAA
   CDS0689 Hv contig 123   (188)  AELLPKIRTMFRPNETPPDSGCAKRAADLVGKRSFFAAAA
      CDS0689 Ta contig    (59)  AELLPKIRTMPPPDETPRDSGCAKRAADLVGKRSFFAAAA
      CDS0689 Zm partial   (158)  AELLPRIRTMPPSDESPRDSGCAKRVADLVGKRSFFTAAG
      CDS0689 Sacc sp 3'   (161)  AELLPRIKTMPASDESPRDSGCAKRVADLVGKRSFFTXAR
   CDS0689 Pinus taeda 3'  (29)  KMKIPKIKTVRFTTESPRDSGCIKREIDRIGXKSFFAPDG
             Consensus    (481)  AELLPRIRTMP  DESPRDSGCAKRVADLVGKRSFF AAA
                                      521                                        560
               CDS0689    (456)  --------DKEPPVCQVLSFAEEQAEEE-------------
            CDS0689 At    (389)  --------DRNFTFCQELKFEE------------------
CDS0689 Medicago trunculata (361)  EEERVMVEEEGGSVCQVLNFAEDDDDDDDYGEQG------
            CDS0689 Os    (415)  ------------EDGRALDVEAPEAVAEA-----------
   CDS0689 Hv contig 123   (228)  AGD---GSAISSYQARVLEAPAPEEAAAAGALSDEAAAAG
      CDS0689 Ta contig    (99)  AGD---CSAISSYQARVLEAPAPEEAAAAAAEALGDEAASA
      CDS0689 Zm partial   (198)  DDG----NLVTPYQARVVELESPEAAAEEAEA--------
      CDS0689 Sacc sp 3'   (201)  EDG----NFVTPYQAPVGEL--------------------
   CDS0689 Pinus taeda 3'  (69)  ITST--PSIDXXDAGKPLRRESVHEIXHAXXX--------
             Consensus    (521)           ARVLE EA E
                                      561                               592
               CDS0689    (476)  ----------------------------------
            CDS0689 At    (403)  ----------------------------------
CDS0689 Medicago trunculata (395)  ----------------------------------
            CDS0689 Os    (432)  ----------------------------------
   CDS0689 Hv contig 123   (265)  ALSDEAAAAAAAEALSDEAAAAEALSDEAAA
      CDS0689 Ta contig    (136)  GEALGDEAAA----------------------
      CDS0689 Zm partial   (226)  ----------------------------------
      CDS0689 Sacc sp 3'   (217)  ----------------------------------
   CDS0689 Pinus taeda 3'  (99)  ----------------------------------
             Consensus    (561)
```

FIGURE 3 (continued)

SEQ ID NO 1: *Nicotiana tabacum* seedy1 coding sequence (CDS0689)

atgagtgtgttacaatacccagaagggattgacccagcagatgttcagatatggaacaatgc
agcatttgataatggagattctgaagatttgtcttcgctgaaacgttcttggtctcctctga
aacccctttcggttaggccatcagattcctttgaatctgatttgtcaagtaaggaaaatcaa
actcctttatttgagaattcatctgttaatctctcatctccgttacccataaagccacttaa
ccctaatggggctctggaaaattcaagactcaagccgaacaagcccaattccaaacagagtc
ttgatgagatggcggctagaaagagcggaaagggaaatgatttccgtgatgagaagaaaata
gacgaggaaattgaagaaattcagatggagattagtaggttgagttcaagattagaggcttt
gagaattgaaaaggctgagaaactgttgctaagactgttgaaaagcgaggaagggttgtgg
cagcaaagtttatggagccaaaacaaagtgttattaagattgaagagcgtatatcaatgagt
gcaagaacaaaggtggagcagagaaggggtcttagtttaggaccatctgagattttttactgg
aacgcggcggcgagggttgagtatggggccatcagatattctagcagggacaacaaaggcac
ggcaattgggaaagcaagagatgattattactcctattcagccaatacaaaacaggcgaaag
tcgtgtttttggaagcttcaagagattgaagaagagggaaaaagttcaagccttagtcctaa
atcaagaaaaactgctgcaagaacaatggttacaacaaggcaggcagttactacaattgcat
caaagaagaatttgaaaaaagatgatggacttttgagttcagttcagccaaagaagttgttt
aaagatctcgaaaagtctgctgctgctaataagaagcccccagaggccggggagggttgtggc
tagtaggtataatcagagtacaattcagtcatcagtagtgagaagaggtctttacctgaaa
atgataaggatgagagtaagagaaatgataagaaacggtcgttatctgtagggaaaacgcgt
gtgtctcaaactgagagcaagaatttgggtactgaaagtagggtgaaaaagagatgggaaat
tcctagtgagattgtagttcatggaaacacagagagtgagaaatctccactaagcattattg
tgaagcctgatttgcttccgcgaattaggattgctcggtgtgtgaatgagactcttagggat
tctggacctgctaaaagaatgatagagttgataggcaagaaatcgtttttcagtagtgatga
agataaggagccacctgtctgtcaagtttttaagttttgcagaggaagatgctgaagaggaa**t**
aa

SEQ ID NO 2: *Nicotiana tabacum* seedy1 protein (CDS0689)

MSVLQYPEGIDPADVQIWNNAAFDNGDSEDLSSLKRSWSPLKPLSVRPSDSFESDLSSKENQ
TPLFENSSVNLSSPLPIKPLNPNGALENSRLKPNKPNSKQSLDEMAARKSGKGNDFRDEKKI
DEEIEEIQMEISRLSSRLEALRIEKAEKTVAKTVEKRGRVVAAKFMEPKQSVIKIEERISMS
ARTKVEQRRGLSLGPSEIFTGTRRRGLSMGPSDILAGTTKARQLGKQEMIITPIQPIQNRRK
SCFWKLQEIEEEGKSSSLSPKSRKTAARTMVTTRQAVTTIASKKNLKKDDGLLSSVQPKKLF
KDLEKSAAANKKPQRPGRVVASRYNQSTIQSSVVRKRSLPENDKDESKRNDKKRSLSVGKTR
VSQTESKNLGTESRVKKRWEIPSEIVVHGNTESEKSPLSIIVKPDLLPRIRIARCVNETLRD
SGPAKRMIELIGKKSFFSSDEDKEPPVCQVLSFAEEDAEEE

FIGURE 4

SEQ ID NO 3: *Oryza sativa* **seedy1 coding sequence**
atggaggaggacccgctcatcccgctggtccacgtctggaacaacgccgccttcgacgactc
ctcgtgttccagatcggcttggctcccccaaagccccgccgtcgcggccgtccgcaagggcg
acaaggagaatcaccgccccgaggttgttgatgtcgccgccggctacgacgtcgaggccgag
atcggccacatcgaggcggagatcctgcgcctctcgtcccggctccaccatctccgcgtctc
caagcagccggagcccaaccgcgacgacgctccgatgggggagatggtcgcgaaggtgaggc
cccggccgaggggcctcagcctcgggcccctggatgtgatctccatcgtcaatcgtgagaag
catccgctgcgcaccaagcagcctccggcgacgcggggcagggggctcagcctcgggcccat
ggagatcgccgcggcgaaccctagggtgcccgcggcggcgcagcatcagcaacagcaacgcg
ctggcacggcgcggatcctgaagccaatcaaggagcctccggtgcagcgtcgcaggggcgtc
agcctcgggccgttggagatccaccacggcgtcggcagcaaggcaccagcggcggcgcgagc
caagccgttcaccaccaagctcaacgccattcgagaagaaacccgaccctccaagcaattcg
ccgtccccgccaagccatggccgtcgagcaatacaaggcagacactggactcgaggcaagga
acagcagcaagtcgagcgaaggcgaggagcccgagccccaggcccaggaggcaatccaatgg
caaggctactgacacaaggggaggcaacaaggtggtggatgagctcaagcccaaaggtgcgt
cgtcaagtcagagcggcagcgccgccgccgccgccactgccaagaggatggcggggagctcc
aagatgagggtcatcccgagccgctacagcctcactcctggcgcttcccttggaagcagtgg
agcacaggagaggcgacgcaagcagtctctcccaggatcatcaggggatgcgaaccagaatg
aggaaatcagagcgaaggtcatcgagccttccaatgatccactctctcctcaaacgatctcc
aaggttgctgaaatgctcccaaagatcaggaccatgccgcctcctgacgagagccctcgcga
ttccggatgcgccaagcgggttgccgaattggtcgggaagcgctcgttcttcacggctgcag
ccgaggacgggcgggcgctcgacgtcgaagcacccgaggcggtcgcagaagcttgagatgaa
ccaccatggtttgatccgttccttccatcagctc

SEQ ID NO 4: *Oryza sativa* **seedy1 protein**
MEEDPLIPLVHVWNNAAFDDSSCSRSAWLPQSPAVAAVRKGDKENHRPEVVDVAAGYDVEAE
IGHIEAEILRLSSRLHHLRVSKQPEPNRDDAPMGEMVAKVRPRPRGLSLGPLDVISIVNREK
HPLRTKQPPATRGRGLSLGPMEIAAANPRVPAAAQHQQQQRAGTARILKPIKEPPVQRRRGV
SLGPLEIHHGVGSKAPAAARAKPFTTKLNAIREETRPSKQFAVPAKPWPSSNTRQTLDSRQG
TAASRAKARSPSPRPRRQSNGKATDTRGGNKVVDELKPKGASSSQSGSAAAAATAKRMAGSS
KMRVIPSRYSLTPGASLGSSGAQERRRKQSLPGSSGDANQNEEIRAKVIEPSNDPLSPQTIS
KVAEMLPKIRTMPPPDESPRDSGCAKRVAELVGKRSFFTAAAEDGRALDVEAPEAVAEA

FIGURE 4 (continued)

SEQ ID NO 5: *Medicago trunculata* seedy1 encoding sequence
aaaaacgttaaggactaaaaatataataaaatttaagtagggattcataatggaagcacccc
tatttacagggatcttaaatataattaaccctaatatttatgacagaaacccttttgaaatc
acatcggagcgtgtatgagtagccgtttcacatccaacggccagtaagagcgtaactttatt
tcttccctcttcaatctccaacggtcacataatctcttccaaatacaaataattccctcttt
caacctcactcttcatttcttcaacccaaacccaaaaaactaatcagattcttcttaaatct
tgaaacctttctcccaaaagcacttaaataaaaaagcacttaaccatgaataacacaaacaa
caacaacattcttcttcattccacacaggttcaagtgtggaacaacgcagcattcgatggtg
aagatttcgccatgaattcatcttctgattccatcaaagagaatctaaacccatccgcattc
aacattgttccttcttcaaacaaaagaactattgatgatgaaattgcggaaattgaaagtga
aattaagcgattaacttcgaagctggaattgcttcgtgttgaaaaagctgaaagaaaaatcg
cttctgaaaagcgtgttagtggaattggtactggaagaatagtagcagcgaagtttatggaa
ccgaagaaaaacgttacaccgaaacgaaacggtgtcgttttcaaggaggagacaccgaaacg
aaacggtgtcgtttcggatacgccgaaatctagggttaattggagaagagggatgagtttag
gtccgatggagattgccgggaaagtgatggcaccgccggcgatgacgattactccggcgacg
gtgaatcggaggaagtcttgtttctggaaaccgcaggaaagttgtgaagtaatgccgtcggg
gattactccggcgacggtgaataggaggaaatcttgttttttgaaacctcaagaaagttgtg
aagaaatcgaagaaaaacgatttgcaaaccgaatttgaatttgaattcaaattcagttaat
tctgcggttggatcgattaagcgtgtgaagaagaaagatgaagaaattgctcaggttcaacc
gaagaagctgtttgaaggtgaaaaatcagtgaagaaatcgttgaaacaaggtagaattgttg
caagccggtataattccggtggtggtggtggtgatgcgaggaaaagatcgttttcggagaat
aataagggtttagggagtgaaatcagggctaagaagagatgggagataccaattgaagaagt
ggatgtgagtggttttgttatgttaccgaagatttcgacaatgaggtttgttgatgagagtc
ctagagattctggtgctgttaaaagagttgctgaattgaatggaaaaagatcttacttttgt
gatgaagatgaggaggagagagtgatggtggaggaagaaggtggttctgtttgtcaggtttt
gaatttgctgaagatgatgatgatgatgatgattatggtgaacaagggtaattgtggaaat
tggaattgatttgtttttgtggggttgtgtggaactggctatgttctgcttgattcttttgc
attttggtgtgaaactaaagatgaggtgaaaagtttatgcttgttaaattggattggtttat
atgttttgaaataataacaacaagcatgtgtcttgcttaataattgtatattgttttgtttg
ttttataatgatatggatttaatttgtatacacaatataatatagtatgcattgagagagtt
tttcgttcagtattcattctgattttagtgtttatctcattctagaagattgtattttgttg

SEQ ID NO 6: *Medicago trunculata* seedy1 protein
MNNTNNNNILLHSTQVQVWNNAAFDGEDFAMNSSSDSIKENLNPSAFNIVPSSNKRTIDDEI
AEIESEIKRLTSKLELLRVEKAERKIASEKRVSGIGTGRIVAAKFMEPKKNVTPKRNGVVFK
EETPKRNGVVSDTPKSRVNWRRGMSLGPMEIAGKVMAPPAMTITPATVNRRKSCFWKPQESC
EVMPSGITPATVNRRKSCFLKPQESCEENRRKTICKPNLNLNSNSVNSAVGSIKRVKKKDEE
IAQVQPKKLFEGEKSVKKSLKQGRIVASRYNSGGGGGDARKRSFSENNKGLGSEIRAKKRWE
IPIEEVDVSGFVMLPKISTMRFVDESPRDSGAVKRVAELNGKRSYFCDEDEEERVMVEEEGG
SVCQVLNFAEDDDDDDDYGEQG

FIGURE 4 (continued)

SEQ ID NO 7: *Saccharum sp.* **encoding sequence (partial 5' end)**
Cgcaccgcgagtttcgaaaaaccaacctatcgcgcctcagatcacgcgaggacgcgaggggga
agcaggaatccctccgctcccagccgcctcctccgctcacccatcgatcgatcgtccgtccg
gtccaggggctctccggcggcggtggcgatggaggaggacccgctcatcccgctggtgcac
gtctggaacaacgccgccttcgaccacgcctcctcctccgcgtggcacgcccactcccctgt
gcccgcgagcgcacgtcgcgaggcggaggggggacaaggagaaccaccgccccgaccccgacc
ccgacgtcgaggcggagatcggccacatcgaggcggagatcctgcgcctgtnctcccgcctn
caccaccttcgcacctccaagcagtcggagccgtccaagcgcggagaggtcgcgcccgcgcc
cgcggcgaaggcgaaagcggcggcggcggcgcggctgcggacgcgggggctcagcctgggcc
cgctcgacgtcgccgctgccggtaaccccaacccgctcaccaccgacaaccagcagcagcag
ccgcgtgccgcgcagggtctgaagccgatcaagcaggccacggcggcggcgggcaagggcgt
aagacttgggccccttcgacatggtcggcgcgaaccctagggtccctccgcccn

SEQ ID NO 8: *Saccharum sp.* **seedy1 protein (partial N-term)**
MEEDPLIPLVHVWNNAAFDHASSSAWHAHSPVPASARREAEGDKENHRPDPDPDVEAEIGHI
EAEILRLXSRLHHLRTSKQSEPSKRGEVAPAPAAKAKAAAAARLRTRGLSLGPLDVAAAGNP
NPLTTDNQQQQPRAAQGLKPIKQATAAAGKGVRLGPLRHGRR

SEQ ID NO 9: *Zea Mays* **seedy1 encoding sequence (partial 3' end)**
ccacgcgtccggccgttcgagaggaggaaggccagcgttccaaggagcacgccgtccccgcc
agaccgtggccatccagcaatgccaggcacccactggatgccaggcaaggcaccgcagcaag
cagagccaaggcgaggagcgggagcataagccccagcaggttcaggaggcagtccacttcca
aggctgccgagacaagagcgggaaatgccaagcctacagaggcgacgaggggaggggagcgaa
gcggtcaatcacaccagcaatgtagccacgacgaagaggccggcggggagctccaaggtcag
ggttgtcccgagccgctacagcatcccacctggctcctccctagcagctgtgacacaaggca
accgatgcaagcagtctctcccaggatcggctactgagaccagagtaaatctcactgagccg
ccgaacgacgagttgtctcctgaagaacttgccaaggttgcagagctgctcccaaggattag
gaccatgccgccttctgatgagagcccgcgtgactcgggatgtgccaagcgtgttgctgatt
tggtcgggaagcgatccttcttcactgctgcaggggacgatggcaatctcgttacgccctac
caggcacgggtggttgaacttgaatcacccgaggcagcagcagaagaagcagaagcttgaga
agtttgtctttgatcaattccgaagtggcttgcatctgggcgtggcctcttttttgcagtgtg
tgctactacatagtctactgttacattcatatcatatcacatttcctattttttcccccttg
agacattgcttagtacttttgtgttgccttgtgaaaagagagtggaaggttcatctgctgat
nccttgtt

SEQ ID NO 10: *Zea Mays* **seedy1 protein (partial C-term)**
TRPAVREEEGQRSKEHAVPARPWPSSNARHPLDARQGTAASRAKARSGSISPSRFRRQSTSK
AAETRAGNAKPTEATRGGSEAVNHTSNVATTKRPAGSSKVRVVPSRYSIPPGSSLAAVTQGN
RCKQSLPGSATETRVNLTEPPNDELSPEELAKVAELLPRIRTMPPSDESPRDSGCAKRVADL
VGKRSFFTAAGDDGNLVTPYQARVVELESPEAAAEEAE

FIGURE 4 (continued)

SEQ ID NO 11: *Arabidospis thaliana* **seedyl coding sequence**
atgacatcaattgaggcaacagaaacgcttaacgctcctccaaagcttcagatctggaacaa
cgctgccttcgacgatggagattctcaaatcacttccgccatcgaagcttcttcttggtctc
acctcaacgaatcattcgattccgattgtagcaaggagaatcagtttccgatttcggtttcc
tcttcgctccaatcctcagtctcgatcaccgaagctccgtcagcaaaatccaagaccgtgaa
gaccaaatccgccgcagatcggagtaaaaagcgagatatcgatgcagagatcgaagaagtag
agaaggagatcggacgattatcgacgaattggagtcgctccgattagagaaggcggagcaa
accgcaagaagcattgctatacgtggaagaatcgttccggcgaagttcatggaatcatctca
gaaacaagtgaaattcgacgattcgtgttttacaggatcgaaatcaagagccactcgtagag
gcgttagtcttggaccagcggagatattcaattccgcgaagaaatctgaaactgtgactcct
cttcaatcagctcagaatcgacgcaagtcttgtttctttaagcttcctggaatcgaagaagg
tcaagtgacgacacgaggtaaaggaagaacgagtttgagtctgagtccgagatctcgcaaag
cgaaaatgacggcagctcagaagcaagcagctacgacggtggggtcaaagagagctgtgaag
aagaagaaggagttctcttaacaatccagcctaagaggctattcaaagaagatgaaaagaa
tgtttctttaaggaaaccattgaaaccaggaagagttgtggctagtaggtacagtcaaatgg
gtaaaacgcagactggagagaaagatgttaggaaaggtcgttgcctgaggatgaagagaaa
gagaatcataagaggtcggagaagagaagagcttctgatgaaagtaacaagagtgaagggag
agtgaagaagagatgggagattccaagtgaagttgatctgtatagcagtggtgagaacggtg
acgagtctcctatagttaaggagctacctaagatcagaacgcttcgtcgtgtgggagggagc
cctcgtgattcaggtgctgctaagagagttgcagaattacaagccaaggatcgtaacttcac
tttttgccagcttctgaagtttgaagaatgaatgatccgcttatcaatttgagtaaaatcca
caactcttgttgtggtt

SEQ ID NO 12: *Arabidospis thaliana* **seedyl protein**
MTSIEATETLNAPPKLQIWNNAAFDDGDSQITSAIEASSWSHLNESFDSDCSKENQFPISVS
SSLQSSVSITEAPSAKSKTVKTKSAADRSKKRDIDAEIEEVEKEIGRLSTKLESLRLEKAEQ
TARSIAIRGRIVPAKFMESSQKQVKFDDSCFTGSKSRATRRGVSLGPAEIFNSAKKSETVTP
LQSAQNRRKSCFFKLPGIEEGQVTTRGKGRTSLSLSPRSRKAKMTAAQKQAATTVGSKRAVK
KEEGVLLTIQPKRLFKEDEKNVSLRKPLKPGRVVASRYSQMGKTQTGEKDVRKRSLPEDEEK
ENHKRSEKRRASDESNKSEGRVKKRWEIPSEVDLYSSGENGDESPIVKELPKIRTLRRVGGS
PRDSGAAKRVAELQAKDRNFTFCQLLKFEE

FIGURE 4 (continued)

SEQ ID NO 13: Sequence of the [PRO0090 – CDS0689 – terminator] expression cassette

cttctacatcggcttaggtgtagcaacacgactttattattattattattattattatt
attttacaaaaatataaaatagatcagtccctcaccacaagtagagcaagttggtgagttat
tgtaaagttctacaaagctaatttaaaagttattgcattaacttatttcatattacaaacaa
gagtgtcaatggaacaatgaaaaccatatgacatactataattttgtttttattattgaaat
tatataattcaaagagaataaatccacatagccgtaaagttctacatgtggtgcattaccaa
aatatatatagcttacaaaacatgacaagcttagtttgaaaaattgcaatccttatcacatt
gacacataaagtgagtgatgagtcataatattattttctttgctacccatcatgtatatatg
atagccacaaagttactttgatgatgatatcaaagaacatttttaggtgcacctaacagaat
atccaaataatatgactcacttagatcataatagagcatcaagtaaaactaacactctaaag
caaccgatgggaaagcatctataaatagacaagcacaatgaaaatcctcatcatccttcacc
acaattcaaatattatagttgaagcatagtagtaatttaaatcaactagggatatcacaagt
ttgtacaaaaaagcaggctggtaccggtccggaattcccgggatatcgtcgacccacgcgtc
cgctgacgcgtgggttccactacatcaagacatctactacactcatcttttttgcacttatt
gggtgtaaattttgaaacccagttgagaaaaatgagtgtgttacaatacccagaagggatt
gacccagcagatgttcagatatggaacaatgcagcatttgataatggagattctgaagatt
gtcttcgctgaaacgttcttggtctcctctgaaacccctttcggttaggccatcagattcct
ttgaatctgatttgtcaagtaaggaaaatcaaactcctttatttgagaattcatctgttaat
ctctcatctccgttacccataaagccacttaaccctaatggggctctggaaaattcaagact
caagccgaacaagcccaattccaaacagagtcttgatgagatggcggctagaaagagcggaa
agggaaatgatttccgtgatgagaagaaaatagacgaggaattgaagaaattcagatggag
attagtaggttgagttcaagattagaggctttgagaattgaaaaggctgagaaactgttgc
taagactgttgaaaagcgaggaagggttgtggcagcaaagtttatggagccaaaacaaagtg
ttattaagattgaagagcgtatatcaatgagtgcaagaacaaaggtggagcagagaaggggt
cttagtttaggaccatctgagatttttactggaacgcggcggcgagggttgagtatggggcc
atcagatattctagcagggacaacaaaggcacggcaattgggaaagcaagagatgattatta
ctcctattcagccaatacaaaacaggcgaaagtcgtgtttttggaagcttcaagagattgaa
gaagagggaaaaagttcaagccttagtcctaaatcaagaaaaactgctgcaagaacaatggt
tacaacaaggcaggcagttactacaattgcatcaaagaagaatttgaaaaaagatgatggac
ttttgagttcagttcagccaaagaagttgtttaaagatctcgaaaagtctgctgctgctaat
aagaagccccagaggccggggagggttgtggctagtaggtataatcagagtacaattcagtc
atcagtagtgagaaagaggtctttacctgaaaatgataaggatgagagtaagagaaatgata
agaaacggtcgttatctgtagggaaacgcgtgtgtctcaaactgagagcaagaatttgggt
actgaaagtagggtgaaaaagagatgggaaattcctagtgagattgtagttcatggaaacac
agagagtgagaaatctccactaagcattattgtgaagcctgatttgcttccgcgaattagga
ttgctcggtgtgtgaatgagactcttagggattctggacctgctaaaagaatgatagagttg
ataggcaagaaatcgttttttcagtagtgatgaagataaggagccacctgtctgtcaagtttt
aagttttgcagaggaagatgctgaagaggaataatgtgtaataaagggagctgctaactctt
ttcatgctctttcaattttcaatcctgccttttaatttttgttcattcgtgccttttaattg
aatggggaagcattcttttgcttcctcaaactggtattctagcttctgaattacattgtatg
gtacaatatgaataaggttttgtcttccggcaggttgtccaagttagtttttagcttaaaat
agatgcggcagcggccgctctagagtatccctcgaggggcccaagcttacgcgtacccagct

FIGURE 4 (continued)

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ttcttgtacaaagtggtgatatcacaagcccgggcggtcttctagggataacagggtaatta
tatccctctagatcacaagcccgggcggtcttctacgatgattgagtaataatgtgtcacgc
atcaccatgggtggcagtgtcagtgtgagcaatgacctgaatgaacaattgaaatgaaaaga
aaaaagtactccatctgttccaaattaaaattcattttaaccttttaataggtttatacaa
taattgatatatgttttctgtatatgtctaatttgttatcatccgggcggtcttctagggat
aacagggtaattatatccctctagacaacacacaacaaataagagaaaaaacaaataatatt
aatttgagaatgaacaaaggaccatatcattcattaactcttctccatccatttccatttc
acagttcgatagcgaaaaccgaataaaaaacacagtaaattacaagcacaacaaatggtaca
agaaaaacagttttcccaatgccataatactcgaac

SEQ ID NO 14: rice prolamin RP6 promoter sequence
ccttctacatcggcttaggtgtagcaacacgactttattattattattattattattat
tattttacaaaaatataaaatagatcagtccctcaccacaagtagagcaagttggtgagtta
ttgtaaagttctacaaagctaatttaaaagttattgcattaacttatttcatattacaaaca
agagtgtcaatggaacaatgaaaaccatatgacatactataattttgttttattattgaaa
ttatataattcaaagagaataaatccacatagccgtaaagttctacatgtggtgcattacca
aaatatatatagcttacaaaacatgacaagcttagtttgaaaaattgcaatccttatcacat
tgacacataaagtgagtgatgagtcataatattattttcttgctacccatcatgtatatat
gatagccacaaagttactttgatgatgatatcaaagaacattttaggtgcacctaacagaa
tatccaaataatatgactcacttagatcataatagagcatcaagtaaaactaacactctaaa
gcaaccgatgggaaagcatctataaatagacaagcacaatgaaaatcctcatcatccttcac
cacaattcaaatattatagttgaagcatagtagtagaatccaacaaca

SEQ ID NO 15: Motif 1 CORE SEQUENCE
WXNAXXD

SEQ ID NO 16: Motif 2 CORE SEQUENCE
KENXXP

SEQ ID NO 17: Motif 3 (coiled coil) CORE SEQUENCE
$EX_{1-6}EXXRLXXXLXXLR$

SEQ ID NO 18: Motif 4 CORE SEQUENCE
$LPXIX_{1-10}RDSGXXKRX_{1-6}K$

FIGURE 4 (continued)